IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re: Patent Application of Charles A. Eldering et al.

Conf. No.: 9699	: Group Art Unit: 3622
Appln. No.: 09/857,160	: Examiner: Alvarez, Raquel
Filing Date: 01 JULY 2001	: Attorney Docket No.: T705-13
Title: Subscriber Identification System	

APPELLANTS' BRIEF IN SUPPORT OF THE APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

In response to the Final Rejection dated October 12, 2007, and the Notice of Pre-Appeal Brief Review dated April 11, 2008, and further to the Notice of Appeal and Request for Pre-Appeal Brief Conference filed on March 12, 2008, Applicants hereby submit an Appeal Brief in accordance with 37 C.F.R. §41.37 for the above-referenced application.

This paper is being timely submitted by virtue of the accompanying Petition for Extension of Time (one-month), which extends the period available for reply through and including June 12, 2008.

(A)   **REAL PARTY IN INTEREST**

The real party in interest is Prime Research Alliance E, Inc., the Assignee of record, which is a wholly owned subsidiary of a privately-owned, non-publicly traded company.

(B)   RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, judicial proceedings or interferences known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

(C)   STATUS OF CLAIMS

Claims 5-14 are canceled.

Claims 1-4 and 15-23 are pending, rejected and are appealed.

(D) STATUS OF AMENDMENTS

No amendment has been filed subsequent to the final rejection.

(E)   SUMMARY OF CLAIMED SUBJECT MATTER

The currently pending independent claims in this application are claims 1, 15, 16 and 23. A concise explanation of each independent claim with reference to the specification follows below.

Independent claim 1 recites:

> In a data processing system, a method of identifying a subscriber comprising the steps of:
>
> (a) monitoring a plurality of viewing sessions;
>
> (b) clustering the plurality of viewing sessions wherein the sessions within a cluster have a common identifier, wherein the common identifier is representative of subscriber selection data, and wherein the clustering occurs independently of subscriber characteristics established prior to the monitoring of step (a); and
>
> (c) identifying a subscriber as belonging to one of the clusters by comparing a plurality of subscriber selections to the subscriber selection data corresponding to the clusters of viewing sessions.

With respect to independent claim 1, the claimed subject matter relates to a method for identifying a subscriber based on their particular viewing and program selection habits (see page 6, lines 28-33). The method includes monitoring a plurality of viewing sessions (see page 5, lines 1-4). The viewing sessions are clustered according to a common identifier which is representative of subscriber selection data (see pages, 6-7). The viewing sessions are clustered independently of subscriber characteristics identified before the viewing sessions are monitored (see page 11, lines19-27). The subscriber is identified by comparing subscriber selection to the selection data corresponding to the clusters of viewing session (see page 11, lines 4-8).

Independent claim 15 recites:

>A method of identifying a subscriber, in a data processing system, the method comprising:
>
>(a) obtaining records of previous viewing sessions;
>
>(b) grouping the records of previous viewing sessions into at least one session group according to at least one common characteristic, wherein the grouping occurs independently of subscriber characteristics established prior to the creation of the records of previous viewing sessions;
>
>(c) receiving a plurality of inputs from a subscriber;
>
>(d) comparing said plurality of inputs to said at least one session group; and
>
>(e) determining if said subscriber is characterized according to one of said at least one session groups.

The subject matter of independent claim 15 is similar to that of independent claim 1 described above. In claim 15 previous viewing sessions are clustered by at least one common characteristic, and the selection data of previous viewing sessions is used to identify the subscriber.

Independent claim 16 recites:

>A method of creating user profiles, in a data processing system, the method comprising:
>
>(a) monitoring a plurality of viewing sessions, wherein each viewing session includes subscriber selection data;
>
>(b) grouping viewing sessions from said plurality of viewing sessions according to at least one common identifier to form at least one session group, wherein the at least one common identifier is determined from the subscriber selection data in the plurality of viewing sessions, and wherein the grouping of the plurality of viewing sessions occurs independently of pre-established subscriber profiles; and
>
>(c) creating a probabilistic determination of a subscriber profile of said at least one session group based on the subscriber selection data.

With respect to independent claim 16, the claimed subject matter relates to a method of creating user profiles in a data processing system (see page 10, lines 10-16). The method includes monitoring a plurality of viewing sessions, and clustering the sessions according to a common identifier as described within independent claim 1.

Independent claim 23 recites:

A system for creating user profiles, comprising:

a data processor, configured to obtain records of previous viewing sessions; group the records of previous viewing sessions into at least one session group according to at least one common characteristic, wherein the processor is enabled to function independently of pre-established subscriber characteristics; receive a plurality of inputs from a subscriber; compare said plurality of inputs to said at least one session group; and determine if said subscriber is characterized according to one of said at least one session groups

With respect to independent claim 23, the claimed subject matter relates to a system of creating user profiles in a data processing system (see page 10, lines 10-16). The method includes monitoring a plurality of viewing sessions and clustering the sessions according to a common identifier as described with respect to independent claim 1.

(F) <u>**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**</u>

The following grounds of rejection are presented for review in this appeal:

- Whether claims 1-4 and 15-23 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,977,964 to Williams. ("Williams") in view of Examiner's Official Notice.

(G)   ARGUMENTS

(1)   Rejection under 35 U.S.C. §103(a) over Williams in view of Official Notice.

(a)   Claims 1-4 and 15-23

The Examiner has not established a *prima facie* case of obviousness to support the rejection of claims 1-4 and 15-23, since Williams in view of the Official Notice does not teach all elements of Applicant's claims and the Examiner's taking of Official Notice is improper and does not render the claims obvious in view of Williams. In particular, Williams in view of the Official Notice does not teach or suggest "clustering the plurality of viewing sessions wherein the sessions within a common cluster have a common identifier...wherein the clustering occurs independently of subscriber characteristics established prior to" monitoring a plurality of viewing sessions, as recited in independent claim 1.

Williams discloses a method and apparatus for automatically configuring a television entertainment system based on a user's monitored system interactions. The system described by Williams monitors user interactions with the system and stores them in a behavior log (column 9, lines 23-27). The system then compares information in the behavior log as well as current system settings with preference information of known users from the profile database (column 9, lines 27-31). Williams determines "which user of a plurality of known system users is currently using the system..." (column 5, lines 35-38).

i.   Williams does not teach clustering viewing sessions

Independent claim 1 recites "monitoring a plurality of viewing sessions... clustering the plurality of viewing sessions" Viewing sessions naturally include all interactions the user engages in with the system during a particular period of subscriber interaction. Characteristics which may be identified by the system during a viewing session include: a history of channels viewed, volume levels, channel dwell time, and other similar user interactions or activity that occurs over any given length of time of

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viewing or period of user activity. In claim 1, the viewing sessions are then clustered based on a common identifier. Claim 1 does not cluster programs based on pre-existing demographic data, nor based on previously known user preferences. Claim 1 clusters viewing sessions which can vary in length and need not cover entire or single programs. However, Williams says nothing pertaining to clustering sessions of user viewing. The profile database 800 includes an indication of which programs a particular user prefers, but does not relate to interactions <u>actually made</u> by the viewer during any particular viewing session which is then clustered with other viewing sessions. Although Williams groups programs based on known user preferences, Williams cannot be said to teach or suggest the monitoring and/or clustering of "viewing sessions", as recited in independent claim 1.

Additionally, updating user preference information is not the same as clustering viewing sessions, as argued to by the Examiner. Claim 1 recites the clustering or grouping of viewing sessions based on a common identifier among the viewing sessions. Williams compares user interactions with known program demographics. Thus, Williams does not cluster subscriber viewing sessions based on a common identifier. Thus, the fact that the user profile database 800 in Williams categorizes or identifies programs according to genre has nothing to do with actually clustering <u>viewing sessions</u> of a user. The user profile database 800 in Williams simply identifies which type of programs a particular user prefers.

ii.   <u>Williams does not cluster independent of known subscriber characteristics</u>

Williams does not teach or suggest that, "the clustering occurs independently of subscriber characteristics established prior to the monitoring of' the viewing sessions. This is because Williams requires there to be subscriber characteristics already entered into the system before making any comparisons. Williams compiles a user profile or preference database that the system calls on to obtain the profile of previously known viewers. Independent claim 1 does not recite any such preference database; claim 1 specifically recites clustering without reference to a database or any other predetermined subscriber characteristics. Williams then uses these profiles to identify which of a

number of previously known users is presently using the system. As can be seen in Fig. 8 of Williams, the user profile database does not contain information related to clustered viewing sessions, but rather merely contains a set of preferences related to a particular user. Thus, Fig. 8 is not a cluster of viewing sessions but instead a table of user preferences. Williams cannot determine users without this pre-entered data for "known system users," and requires preexisting knowledge of the users that will be interacting with the system so that there is a starting point for determining the user. The clustering of viewing sessions, as recited in claim 1, allows the user to be determined without the need for such pre-entered data. Williams groups programs and does not cluster viewing sessions in a manner similar to claim 1.

Additionally, Williams does not disclose "identifying a subscriber as belonging to one of the clusters by comparing a plurality of interactions." Williams determines "which user of a plurality of known users is currently using the system" by comparing user interactions to a set of characteristics associated with known users. These characteristics are input into the database (column 5, lines 35-38). Williams compares user inputs with "user preference information" and does not compare "a plurality of subscriber selections to the subscriber selection data corresponding to the clusters of viewing sessions." Williams teaches that "In step 304, system controller 104 compares the information contained in the behavior log as well as the current system settings with user preference information for at least a subset of the plurality of entertainment system users" (column 9, lines 28-31). This is not the same as "identifying a subscriber as belonging to one of the clusters by comparing a plurality of interactions."

In the alternative, if even if Williams can be read to disclose clustering, Williams certainly does not teach clustering based on "a common identifier representative of subscriber selection data." In Williams, user preference information stored in the user profile database is updated only after the user is identified. Fig. 2 of Williams shows that step 204, where the "System Controller Determines Which User is Currently Using the System," occurs before step 210, where the "System Controller Monitors and Updates User Profile Information." If it is argued that updating user profile information is "clustering," then the updating of user profile information in Williams must be based on

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which user is identified, not based on "a common identifier representative of subscriber selection data," as recited in claim 1. Additionally, Williams does not group "previous viewing sessions into at least one session group based on at least one common characteristic, wherein the grouping occurs independently of characteristics established prior to the obtaining", and "comparing said plurality of inputs to said at least one session group..." Williams merely groups programs using predetermined subscriber preferences established prior to monitoring user interactions Fig. 2.

iii. Taking of Official Notice

In the Final Office Action, the Examiner acknowledged that Williams does not teach or suggest the "subscriber being identified independently of subscriber characteristics established prior to the monitoring step." The Examiner has further taken Official Notice (see page 3 of the Final Office Action) that it is "old and well known in marketing and the like to identify demographic information of who is currently watching a TV program without having prior information on the viewers in order to broadcast programs or commercial to a large audience." However, Applicants disagree that there are "facts outside of the record which are capable of instant and unquestionable demonstration as being 'well-known' in the art," as required by M.P.E.P. §2144.03, which would support an Examiner's finding of Official Notice, thereby making it impossible for Applicants to properly and adequately respond to the present rejection.

To the extent that the Examiner's taking of Official Notice may be applied to Williams, Applicants respectfully traverse the Examiner's taking of Official Notice, and respectfully request that the Examiner support the taking of Official Notice by producing a relevant reference that shows the "subscriber being identified independently of subscriber characteristics established prior to the monitoring step", and that the Examiner identify a specific teaching in the reference to support a combination with Williams.

In the alternative even if the Examiner's taking of Official Notice is correct, Williams in view of the Examiner's Official Notice does not teach that "clustering the plurality of viewing sessions wherein the sessions within a common cluster have a

common identifier...wherein the clustering occurs independently of subscriber characteristics established prior to" monitoring a plurality of viewing sessions, as recited in independent claim 1. Williams does not cluster viewing sessions and identify a user based on user interactions, but rather groups programs based on known user characteristics and known demographic information known about viewers of a particular program. Williams also does not identify a user by comparing the user to a cluster of viewing sessions. It cannot therefore be said that claim 1 is obvious over William in view of Official Notice, since not all of the elements of independent claim 1 are taught by such a combination.

Moreover Applicants do not claim to identify demographic information of who is currently watching a TV program as stated in the Examiner's Official Notice. Applicants' claimed method may identify a subscriber based on volume, dwell time or other such traits of a specific user's viewing sessions, but does not rely on known demographics usually related to a specific program. Claim 1 does not identify a subscriber by correlating demographic characteristics which are usually associated with a specific program to characteristics of known users. Applicants' claimed method does not teach identify the subscriber based on demographic information, but instead identification is based on user interactions with the system. Claim 1 also does not rely on user preferences stored in a behavior log as does Williams. Williams does not teach any such method of identification and Williams in view of the Official Notice still does not teach any such method of identification. Therefore, claim 1 is patentable over Williams and Official Notice.

Independent claims 15, 16 and 23 are patentable over Williams and Official Notice for the same reasons as independent claim 1. Dependent claims 2-4 and 17-22 are patentable by virtue of their dependence on independent claims 1, 15 and 16, respectively.

Conclusion

For the reasons set forth above, Applicants submit that the rejection of claims 1-4 and 15-23 is in error, and that the application, including claims 1-4 and 15-23, is in condition for allowance. Accordingly, Applicants respectfully request that the Board reverse the Examiner's rejections of claims 1-4 and 15-23 and remand this application for issue.

(H)   CLAIMS APPENDIX

1.   In a data processing system, a method of identifying a subscriber comprising the steps of:

   (a)   monitoring a plurality of viewing sessions;

   (b)   clustering the plurality of viewing sessions wherein the sessions within a cluster have a common identifier, wherein the common identifier is representative of subscriber selection data, and wherein the clustering occurs independently of subscriber characteristics established prior to the monitoring of step (a); and

   (c)   identifying a subscriber as belonging to one of the clusters by comparing a plurality of subscriber selections to the subscriber selection data corresponding to the clusters of viewing sessions.

2.   The method of claim 1, wherein the monitoring of step (a) further comprises the steps of:

   (i)   recording subscriber selection data for each viewing session; and

   (ii)   generating program characteristics and program demographic data from programs viewed for each viewing session.

3.   The method of claim 2, wherein the clustering of step (b) further comprises the steps of:

   (i)   generating a session data vector from the subscriber selection data, the program characteristics and the program demographic data for each viewing session; and

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(ii)   passing a plurality of session data vectors to a classification system to form clusters of session data vectors.

4.   The method of claim 2, wherein the clustering of step (b) further comprises the steps of:

(i)   generating a signature signal from the subscriber selection data for each viewing session;

(ii)   generating a session profile from the subscriber selection data, the program characteristics and program demographic data for each viewing session and wherein the signature signal is the common identifier; and

(iii)   passing a plurality of session profiles to a classification system to form clusters of session profiles.

5-14. (canceled)

15.   A method of identifying a subscriber, in a data processing system, the method comprising:

(a)   obtaining records of previous viewing sessions;

(b)   grouping the records of previous viewing sessions into at least one session group according to at least one common characteristic, wherein the grouping occurs independently of subscriber characteristics established prior to the creation of the records of previous viewing sessions;

(c)   receiving a plurality of inputs from a subscriber;

(d)   comparing said plurality of inputs to said at least one session group; and

(e)   determining if said subscriber is characterized according to one of said at least one session groups.

16.   A method of creating user profiles, in a data processing system, the method comprising:

(a)   monitoring a plurality of viewing sessions, wherein each viewing session includes subscriber selection data;

(b)   grouping viewing sessions from said plurality of viewing sessions according to at least one common identifier to form at least one session group, wherein the at least one common identifier is determined from the subscriber selection data in the plurality of viewing sessions, and wherein the grouping of the plurality of viewing sessions occurs independently of pre-established subscriber profiles; and

(c)   creating a probabilistic determination of a subscriber profile of said at least one session group based on the subscriber selection data.

17.   The method of claim 16, further comprising:

(d)   receiving a plurality of inputs from a subscriber;

(e)   comparing said plurality of inputs to said at least one session group; and

(f)   identifying that said subscriber corresponds to at least one of said at least one session group based on said subscriber selection data and said plurality of inputs.

18.   The method of claim 17, further comprising:

(g)   targeting advertisements based on said probabilistic determination of said at least one at least one session group to which said subscriber corresponds.

19.   The method of claim 16, wherein said probabilistic determination of the subscriber profile is based on the programs viewed.

20.   The method of claim 16, wherein said probabilistic determination of the subscriber profile is based on the speed at which channels are changed.

21.   The method of claim 16, wherein said probabilistic determination of the subscriber profile is based on the number of times the program guide is accessed.

22.   The method of claim 16, wherein said probabilistic determination of the subscriber profile is based on the volume sequence.

23.   A system for creating user profiles, comprising:

a data processor, configured to obtain records of previous viewing sessions; group the records of previous viewing sessions into at least one session group according to at least one common characteristic, wherein the processor is enabled to function independently of pre-established subscriber characteristics; receive a plurality of inputs from a subscriber; compare said plurality of inputs to said at least one session group; and

determine if said subscriber is characterized according to one of said at least one session groups.

(I) <u>**EVIDENCE APPENDIX**</u>

None.

(J)   <u>RELATED PROCEEDINGS APPENDIX</u>

None.

Respectfully submitted,

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